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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,775

09/10/2003

Shaoming Liu

117122

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EXAMINER

SAINT CYR, LEONARD

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

12/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/658,775	Applicant(s) LIU, SHAOMING	
	Examiner LEONARD SAINT CYR	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>08/12/08 and 09/30/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Amendment, filed 06/25/08 with respect to claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 have been fully considered and are persuasive. The rejection of claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 has been withdrawn.

Applicant argues that neither Liu-II nor Dolan fail to teach calculating a distance between the first text sentence and the second text sentence on the basis of the following expression: the distance = (the calculated distance between the first R tree and the second R tree) / (a sum of vertexes in the first R tree and the second R tree); the word information and the case information are assigned to vertexes of the tree so that at least one vertex includes both the word information and the case information (Amendment, pages 11- 14).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the different sections of the apparatus, such input section, calculation section, etc. must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims **1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As per the most recent interpretation of the Interim Guidelines regarding 35 U.S.C. 101, claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 define non-statutory processes because they merely manipulate an abstract idea (the mathematical manipulation of data) without a claimed limitation to produce a useful, concrete, tangible

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result. If the acts of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter (Benson, 409 U.S. at 71-72, 175, USPQ at 676).

Furthermore, claims define nonstatutory processes if they simply manipulate abstract ideas (Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759). As for guidance to areas of statutory subject matter, see 35 U.S.C. 101 Interim Guidelines (with emphasis of the Clarification of Interim Guidelines For Examination of Patent Applications for Subject Matter Eligibility); as an example, in Alappat, the claimed output smooth waveform (consisted of lighting pixels on an oscilloscope/display) is a useful, concrete, tangible, final result; in Arrhythmia, the claimed useful, concrete, tangible, final result represented the condition of a patient's heart; in State Street, the claimed useful, concrete, tangible, final result was data output that represented a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent.

Claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 reviewed in light of the specification, simply recite a mathematical algorithm for text comparison.

As can be seen by claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 these claims recite a mathematical algorithm by setting forth the step of "calculating a distance between the first text sentence and the second text sentence on the basis of the following expression: the distance = (the calculated distance between the first R tree and the second R tree) / (a sum of vertexes in the first R tree and the second R tree); the word information and the case information are assigned to vertexes of the tree so

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that at least on vertex includes both the word information and the case information; etc.”

These steps are mathematical in nature.

Reviewing the claims, we have a field of use limitation at claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 preamble. This limitation does not in any way further limit the algorithm because:

As per claims, the language “ A text sentence comparison method/apparatus” does not transform the claimed subject matter into statutory subject matter. The recital is merely a field of use or desired end use limitation.

A mathematical algorithm is not made statutory by “ attempting to limit the use of the formula to a particular technological environment. “Diehr, 450 US. at 191, 209 USPQ at 10. Thus “field of use” or “end of use” limitations in the claim preamble are insufficient to constitute a statutory process.

The above review of the claims shows that the subject matter claimed in addition to the mathematical algorithm is not sufficient on its own to render the claims as a whole statutory.

It is readily apparent that when claims 1, 3, 5 - 8, 10, 12 - 15, 17, 19 - 22, 24, and 26 - 28 are each taken as a whole, the claims are directed to the preemption of a mathematical algorithm, and thus are non-statutory.

Claims **1, 3, 5 - 8, 10, 12 – 14**, are rejected under 35 USC 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps to be performed, a statutory process under 35 USC 101 must be tied to another

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statutory category (such as a manufacture or a machine) or transform underlying subject matter (such as an article or material) to a different state or thing. Claims 1, 3, 5 - 8, 10, 12 – 14 appear to recite mental steps and do not identify the apparatus that accomplishes the method steps like “the memory 16 to convert the results of the semantic analysis of the text sentences into either RO trees or R trees” described in page 20, lines 17 - 21, of the specification. Thus, claims 1, 3, 5 - 8, 10, 12 – 14 do not define a statutory process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS

12/03/08

/Richmond Dorvil/

Supervisory Patent Examiner, Art Unit 2626